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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/742,938	12/23/2003	Vasu J. Bibikar	42339-198342	7156

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EXAMINER

HASSAN, AURANGZEB

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/742,938	Applicant(s) BIBIKAR ET AL.	
	Examiner Aurangzeb Hassan	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 6-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jahnke et al. (US Publication Number 2002/0062408 hereinafter "Jahnke") in view of Spencer (US Publication Number 2004/0243739).

3. As to claim 1, Jahnke teaches an apparatus comprising:

a direct memory access register adapted to hold a descriptor (DMA control register, page 2, paragraph [0027]), said register comprising:

a command register comprising a branch enable bit (elements 408 and 409, figure 4, page 4, paragraphs [0047-0048]);

a source address register; (SADDR register, element 325, figure 3, paragraph [0028])

a target address register; and (TADDR register, element 326, figure 3, paragraph [0028])

a descriptor address register (output address register, element 311, figure 3, paragraphs [0036-0040]).

Jahnke fails to explicitly set for the limitation wherein an apparatus comprises a direct memory access register comprising:

a command register comprising a compare enable bit.

Spencer teaches in an analogous apparatus wherein a direct memory access register comprises a command register comprising a compare enable bit (a compare enable field at bits 7:4, paragraph [0085], lines 11-18).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the apparatus of Jahnke with the above teaches of Spencer. One of ordinary skill in the art at the time of the applicant's invention would have been motivated to make such modifications in order to increase the bit transmission rate (paragraph [0002]) and prevent stalling in reference to data memory access (paragraph [0003]) where DMA register size is limited (paragraph [0085]).

4. As per claim2, teachings of Jahnke as modified by the teaching of Spencer as applied to claim 1 above, teaches an apparatus wherein said compare enable bit (see Spencer a compare enable field at bits 7:4, paragraph [0085], lines 11-18) is adapted to indicate a comparison operation to be performed by said direct memory access controller based on said source address register (see Jahnke, SIADD, paragraph [0059]) and said target address register (see Jahnke, TIADD, paragraph [0059]).

5. Claims 3 – 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jahnke.

6. As to claim 3, Jahnke teaches an apparatus wherein said branch enable bit is adapted to indicate a branch operation to be performed by said direct memory access controller to access another descriptor (elements 408 and 409, figure 4, paragraph [0047-0048]).

The examiner notes the teachings of Jahnke to utilize a CNTVAL counter, element 333 of figure 3, as a bit used to determine a no for branching, element 408 of figure 4, paragraph [0047], line 4, and a yes for branching, element 409 of figure 4, paragraph [0048], line 2.

7. As to claim 4, Jahnke teaches an apparatus further comprising a control status register (DMA status register DMAST, element 314, figure 3, paragraph [0027]), said control status register comprising a compare status bit (DMA status bit, table 5, paragraph [0037]).

8. As to claim 5, Jahnke teaches an apparatus wherein said branch enable bit is adapted to indicate a branch operation to be performed by said direct memory access controller to access another descriptor based on said compare status bit (clear the DMAST status and allow for additional DMA transfer action, paragraph [0048]).

Response to Arguments

9. Applicant's arguments filed 6/8/2006 have been fully considered but they are not persuasive. The applicant argues:

1) Jahnke fails to teach a single bit branch enable bit. Instead Jahnke teaches 24 bits for branch enable functionality.

2) Jahnke fails to teach the branch enable bits comprised in a command register. Instead Jahnke teaches a counter which is not a register.

10. As per argument 1, the Examiner disagrees. The claims of the current application do not require only a single bit for branch enable. Nowhere in the claims is the word "single" or "only one" found. The cited reference, Jahnke, explicitly discloses at a branch enable bit.

11. As per argument 2, the Examiner disagrees. Registers are fundamental building blocks for counter implementation and using registers in order to properly have functionality of status recording of the count. Mano et al. (Logic and Computer Design Fundamentals, pages 331 to 333) discloses counter implementation via registers. Clearly from this citation one recognizes the use of registers to implement counters, therefore the counter in Jahnke also consequentially being comprised of a register.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aurangzeb Hassan whose telephone number is (571)272-8625. The examiner can normally be reached on Monday - Friday 9 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571)272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AH



KIM HUYNH
SUPERVISORY PATENT EXAMINER

8/20/06